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Wildlife
IN NORTH CAROLINA

TEN CENTS AUGUST 1949

Success Story

Photos by Jack Dermid

Good Management Produces More Bobwhites

Errata

THE NAMES TO THE RIGHT SHOULD HAVE APPEARED IN THE MASTHEAD ON PAGE 3

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Wildlife IN NORTH CAROLINA

The Official Publication of The North Carolina Wildlife Resources Commission, Raleigh

A monthly magazine devoted to the protection and restoration of our Wildlife Resources and to the improvement of hunting and fishing in North Carolina

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IN THIS ISSUE

August 1949 — Vol. XIII, No. 8

CONTENTS

Bobwhite Quail
By Rod Amundson ..... Page 4

Simplified Bird Photography
A Nature Short by Jack Dermid ..... Page 9

A New Slant on Predation
By Werner O. Nagel ..... Page 14

I Was an Out-of-Season Hunter
Anonymous ..... Page 17

North Carolina Bluegills ..... Page 18

Get It Off Your Chest
By Win Donat ..... Page 20

Old "Hole-in-the-Head"
By Jay Breen, United Press ..... Page 22

COVER

In this oil painting Win Donat has captured the beauty—and the pathos—of a young fawn. Each year many deer are killed on the highways by incautious, speedy drivers. Motorists in areas of deer populations should give thought to deer crossing roads, and avoid hitting them.

★ ★ ★

Wildlife in North Carolina recognizes the need for close cooperation between State and Federal conservation agencies and the people who hunt and fish—to bring about a restoration of our renewable resources. The Editor gratefully receives for publication all news items, articles, photographs, and other material dealing with the various activities which combine to make North Carolina a better state for hunting and fishing. Full credit is given for all material published.

★ ★ ★

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Once again we remind our readers that the expiration date of *Wildlife* appears on the address label. Your subscription may expire with this issue. If the figures "8-49" appear on your address label, this is the last copy we can send you until we receive your renewal. Send in cash, a personal check, or a postal note—but no stamps, please!

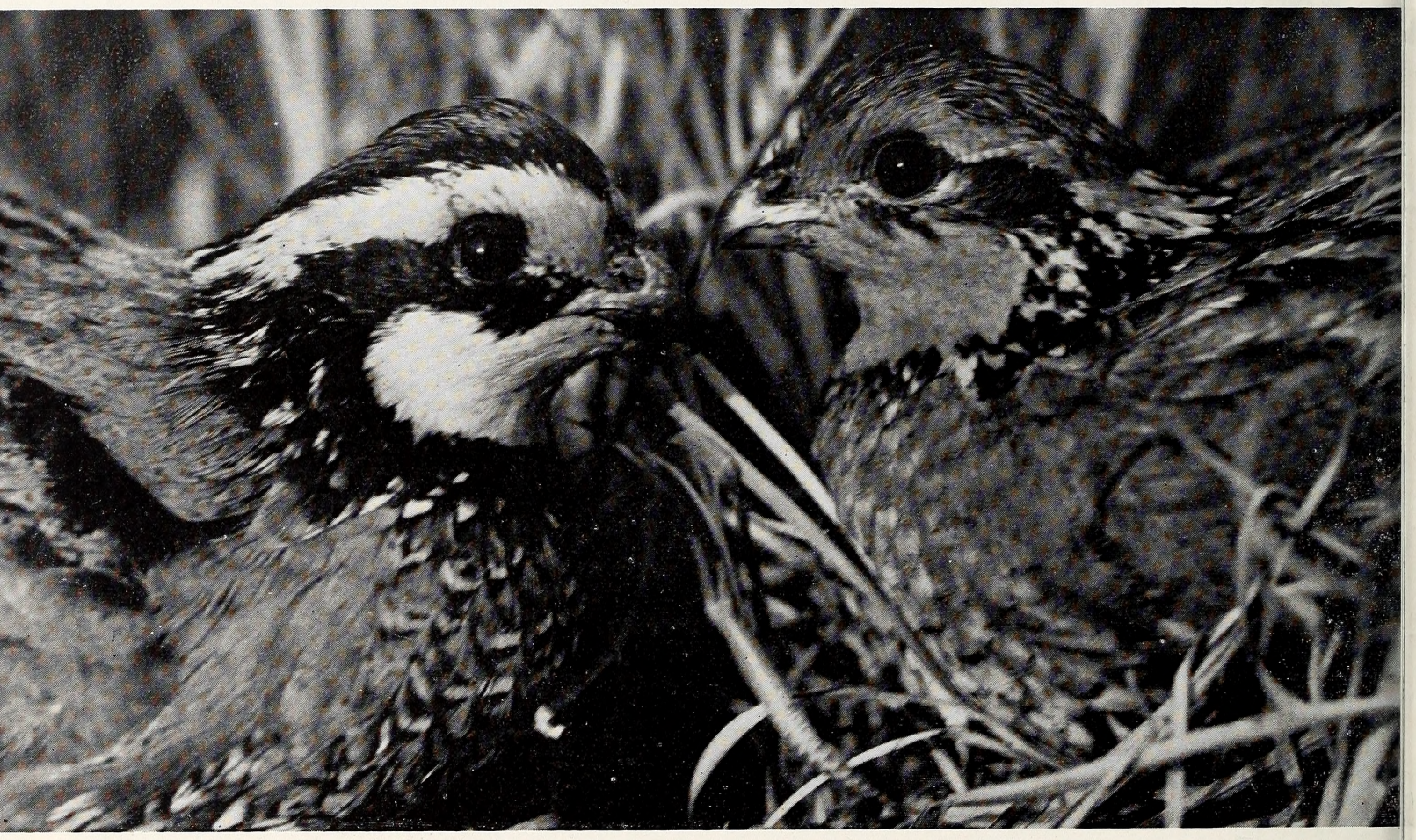
Rod Amundson, Editor

LET'S LEARN ABOUT OUR WILDLIFE

The Seventh of a Series on Game Birds and Game Mammals of North Carolina

THE BOBWHITE QUAIL

By Rod Amundson



Mr. and Mrs. Bobwhite Quail. Note the brighter color markings on the male at left. (Photo courtesy U. S. Fish and Wildlife Service)

SO MUCH has been written about the bobwhite quail that it would be futile to try to express any new concepts in an article of this type. Our purpose here is simply to point out some pertinent facts regarding bobwhite and its relationship to North Carolina sportsmen.

Unfortunately, most of the knowledge gained by sportsmen as to the habits of quail is obtained by working behind gun dogs and sighting down a shotgun barrel. Sportsmen who take the time or have the time to observe quail the year around are few in proportion to the thousands of Tarheel scattergun enthusiasts who go bird shooting each fall.

HISTORY

ALTOGETHER, there are five general types of quail in the United States, including seven races of bobwhites. The species native to North Carolina is the Eastern Bobwhite *(Colinus virginianus)*. For a number of years sportsmen have engaged in importing a subspecies of the bobwhite commonly called Mexican quail, since they originate in Mexico. Where introductions were successful, these exotics have become interbred with the native species to produce a semi-hybridized strain. There has been a great deal of discussion among sportsmen and conservationists as to the advantages or disadvantages

of such importations. Conservationists have come to the conclusion that, except in rare cases, artificial stocking of any kind is economically unsound, especially in the case of pen-reared birds. Many sportsmen consider the Mexican quail inferior to the bobwhite in size and temperament. Some hunters believe that the cross-bred variety is much more nervous than the native bobwhite, and does not lie to dogs with anything like the tenacity of local birds. At any rate, Mexico has placed an embargo on quail, and no more may be shipped into the United States.

Bird hunters—devotees of quail shooting—are as partial to their sport as fox hunters or beagle advocates are to theirs. They fairly live for the opening of the quail season, and support several dogs the year around just for the pleasure of shooting over them a few weeks in the fall.

It is inevitable that a sport as popular as quail shooting takes a heavy toll of birds each year. Quail are a classic example of a species caught between an ever shrinking habitat and an ever increasing hunting pressure. Despite these two reducing forces, quail have managed to maintain something like a secure position in the list of wild game.

There are more quail in North Carolina today than there were in the days of Sir Walter Raleigh. To a degree, agriculture is beneficial to quail; certainly the haphazard farming methods used in colonial days, with abundant weed patches, inefficiently harvested grain, and the miles of rail fences with their growth of shrubs and vines, provided an ideal combination for the production of quail. Recently, however, metal fences, modern harvesting machinery, clean farming, and fence-to-fence cultivation have made living a difficult problem for quail. Combined with growing hunting pressure, these agricultural practices have reduced quail populations to a point where the length of the season and the size of the daily bag depend directly on wintering and nesting conditions. A severe winter and a wet, rainy nesting season could easily reduce quail hunting in North Carolina to mere gesture toward satisfying the sportsmen's demands. Such a calamity can happen next year. An understanding of the habitat requirements of quail is necessary to the formulation of plans for corrective and preventative measures.

GENERAL CHARACTERISTICS

A WINGSPREAD of 14 to 16 inches belies the fact that the average bobwhite weighs but four to six ounces. Quail are built like chickens, with a short, plump body and short, curved wings. Markings of sexes are similar in pattern, with the males having brighter hues, particularly on the head and throat.

Quail are gregarious birds, living in groups throughout most of the year except during the mating season when they pair off and begin the task of bringing forth the young. Coveys vary in size and constitution. In late summer a covey may consist of the parent birds and their offspring, and include the young of other birds which might have succumbed to predators. Mortality during the breeding season is high, and a family group of birds may contain the young of several other pairs. On the other hand, adult birds, having lost their own young, may adopt the offspring of others.

Despite the willingness of a covey of quail to accept outsiders, the acceptance of strangers ends when the cover within the locality of the covey has been saturated with birds. Apparently, when a covey reaches proportions beyond which the amount of food and cover would be inadequate for additional birds, members of the covey will drive off any drifters which might like to join the flock. This phenomenon has been observed and recorded by David Damon, a biologist working with the Nebraska Game, Forestation and Parks Commission, and is an important argument against stocking pen-reared birds in localities where the habitat is already saturated with quail, however small and infrequent the coveys in that area may be.

BREEDING

DESPITE the heavy toll of birds taken each year by hunters, predators, disease, and severe weather, quail have been able to maintain popula-

A Bobwhite Quail whistling on a fence post is a sight and sound dear to the hearts of nature lovers and quail hunters. (Photo courtesy U. S. Fish and Wildlife Service)

A bursting covey of quail taxes the skill of the shotgun pointer. This is an actual photograph of a bird hunting scene. (W.R.C. Staff Photo)

tions to significant numbers. The urge to nest and bring forth young is strong, and a pair of birds will try again and again if the forces of nature interfere with the success of first attempts. This fact accounts for late broods of young. Half-grown birds have been observed in the field long after the shooting season has opened. Late hatches give rise to the belief that quail produce two broods per year. Such is not the case. Once a pair of birds has brought off a hatch of eggs, nesting is complete for the year.

The family life of quail is dramatic. Courtship begins in the early spring when male birds fluff their feathers, prance and strut to win the favor of a mate. Once the nuptial alliance has been made the birds indulge in a two weeks honeymoon before the nesting activity is begun.

Nests are more or less haphazard affairs, usually constructed in a small depression scratched in the soil, and lined with whatever vegetation seems to be convenient. Bobwhite himself takes over the job of building the nest. He usually selects an area of relatively short but dense vegetation, along a field border, or, too often for the welfare of the future family, in a hay field or a grain field where harvesting machinery may later destroy the nest and the site and make another attempt at nesting necessary. The old rail fence once provided an ideal nesting spot with its growth of tall grasses and small bushes, but this institution is fast disappearing from the North Carolina scene. Where quail nest in alfalfa or clover fields, conscientious farmers make attempts to save adult birds, if not the nests, by the use of flushing bars. These are mechanical devices which fasten to the sickle bar of the mower and tend to frighten brooding birds from their nests.

Once a nest has become established, the female deposits eggs in it at the rate of one per day until from 12 to 16 snow-white eggs have been laid. Having sired the prospective chicks, selected the nesting site, and built the nest, bobwhite makes himself further useful by "sitting in" to help incubate the eggs. The 23-day incubation period is a critical part of the quail life cycle. Spring rains and floods can ruin the nest and chill the chicks to death after they have hatched. A host of predators enter the drama. Snakes, skunks, foxes, raccoons, crows, hawks, owls, cotton rats, stray cats, self-hunting dogs, weasels, and mink are potential destroyers. To these are added the hazards of agricultural operations. There have been many cases where the female parent has been killed by one means or another, and the loyal cock is left with the task of completing the hatching and caring for the young. The paternal instinct is so strong in the bobwhite that unmated males have been known to adopt and rear artificially incubated young!

Quail chicks are tiny, delicate creatures. One might wonder how such a diminutive bit of fluff can be endowed with sufficient strength to break through the rather hard, tough shell of the egg. A parable on the infinite care of Providence is the formation of a small, sharp nail on the chick's beak. This is used to chisel a small hole in the shell, allowing the youngster to breathe, gain strength, and about 48 hours later, to emerge into the outer world.

Male birds may take over the task of hatching eggs if the female parent is killed. (Photo courtesy U. S. Fish and Wildlife Service)

The chicks, from the moment they are hatched, are capable of getting around very well by themselves, but most of the hours of their first two weeks are spent under the warm protection of their parents' feathers. They chill easily, and must be kept as dry as tinder at all times. At the end of two weeks, however, the soft down with which they emerged from the egg has been replaced with enough feathers to enable them to make short flights. At this time they weigh less than an ounce. A voracious appetite for small insects, seeds, and tender shoots of grass and other vegetation gives the youngsters a rapid growth, and by the time they are three months old they have attained their adult plumage and can fly and roost with their elders.

FOOD HABITS

BEING ground dwellers, quail depend for their livelihood on foods they find on or near the ground. Despite this restriction, the food of quail is extremely varied, almost an index of the insect and vegetable life indigenous to their habitat. Unlike the diet of certain game and fur-bearing animals, the food habits of quail are entirely beneficial from an economic point of view. Every farmer knows the value of several coveys of quail on his farm in destroying insects and weed seeds. It is true that quail take grain, but most of the grain they consume is already lost to the market and would otherwise be wasted. Quail may take a small amount of grain from the field before harvest time, but even if each bird ate its weight in wheat or oats, the loss to the farmer would be small indeed.

Quail like to feed near protective cover. This fact has an important bearing on quail management (see below). They have a liking for fruits and berries, but seldom invade orchards or gardens to the detriment of either. They may jump up from the ground to reach low-hanging raspberries or blackberries, or fly into a tree and pluck the berries within reach. One hears tales of adult quail flying low over ripened wheat, beating the grain off the stalks to the ground where the young can eat it. Quail are probably less imaginative than the people who indulge in such day-dreaming.

In North Carolina, as elsewhere, the period of winter and early spring is a critical one for quail from the standpoint of food. As has been mentioned, modern harvesting methods leave little waste grain on the ground for quail to eat. Often, winter snows cover what little food is on the ground, and unless there is plenty of seed-bearing growth above the snow line, the birds may starve. Fence-to-fence farming, neat and efficient-appearing though it may be, has done more to reduce quail populations than the shotgun ever did.

MANAGEMENT

FEW species respond so quickly to management or mis-management as quail. They are so closely tied to the soil that land management practices which benefit the soil—and thus agriculture—benefit quail. Land management practices which result in eroded, worn-out soil have the opposite effect. But first, let us dispose of artificial stocking of quail as a management practice. Artificial propagation and stocking of any game species is justified only when suitable habitat in a given area is present, but the desired species is totally absent. There is not a single county in North Carolina which does not have at least 100 coveys of quail. Every county in the state is producing as many quail as its habitat will support. In other words, the amount of cover available to quail is already kept saturated with birds through natural reproduction. Additional pen-reared birds would be a total waste. The only way to double the quail production on a farm or in a county would be to double the amount of suitable habitat. By natural reproduction the birds already living in the area will stock the newly created habitat—at no cost whatever to the State. The following excerpt from a wildlife resources survey report by William L. Hamnett is an example of habitat management versus artificial stocking:

"Mr. Mason Goodman who owns a 456 acre farm in the northwestern section (some of the best bird territory in Cabarrus county) reports that starting in 1941 he released 300 birds on his farm over a period of four years. At present he has six coveys of birds on his place and there has been very little hunting done since the birds were released. Overhunting has certainly not hurt these birds but an interesting fact came to light during the discussion with this farmer. He made the remark that the big field in front of his house (about 15-20 acres) had as many birds 25 years ago as his whole farm does now. On being asked what the difference was between the field then and now he said that it was planted to the same crops (wheat this year) but there was about a half acre of rocks in the center of the field which has been allowed to grow up in a thicket and a brushy fencerow dividing the field. When he bought his first tractor he removed the fence and the rocks, making one continuous field. At the present time there are no birds using this area."

Fortunately for all concerned, North Carolina sportsmen make few demands for artificial stocking. Their money can be spent for more profitable projects.

Two imported plants have proven a boon to quail and quail hunters in North Carolina, and a third is being tested. Bicolor and serecia lespedeza plant-

Artificial propagation and stocking of quail on a large scale is impractical and no longer practiced in North Carolina. (W.R.C. Staff Photo)

Nests are well-concealed, though they may be but a shallow depression in the ground. (Photo courtesy U. S. Fish and Wildlife Service)

ings have been so successful in providing food and cover for quail, and for producing coveys of quail where none existed before, that hunters (in all sincerity) have reported that their dogs actually look for lespedeza border strips in which to please their masters by freezing on a covey of birds. Besides providing homes for quail, lespedeza plantings halt soil erosion and utilize otherwise useless border strips between agricultural crops and forest lands.

If the third plant, multiflora rose, proves successful, it may do for quail what the now obsolete rail fence once did. The rose is a thick-growing shrub which becomes dense enough to form a hog-tight fence that not only beautifies the countryside during the blossom season, but provides an abundance of fruit and seeds. It should warm a quail hunter's heart to think what this shrub might do for quail throughout the State. It should also mean a dollars and cents saving for farmers who might be relieved of the necessity of laying out cash for fence posts and wire.

The ever-increasing demand for quail can be supplied abundantly when sportsmen, farmers, and conservationists work together to provide quail habitat throughout the State.

Regulation and protection are as necessary to successful quail management as they are to any other game species. Biologists keep a constant check on quail abundance and scarcity, and make recommendations for shooting seasons and bag limits accordingly. Man can influence all factors of physical environment except weather. Severe winters and wet nesting seasons can decimate quail despite otherwise ideal habitat. This must be taken into consideration in regulating the annual sporting harvest.

The concept that "shooting into coveys to scatter them" is necessary to quail management is pure poppycock. Any competent observer of quail knows that as soon as a covey has been shot into (if it is not hunted down to the last bird) the birds begin sounding their assembly call and gathering together again. This is usually accomplished within an hour after the birds were disturbed, and the covey remains together until another party of hunters or some other disturbance scatters them. Frequently coveys which have been reduced to a few birds will join another depleted group to form a new group. (One of the first and finest discussions of quail covey behavior appeared in the November, 1948, issue of WILDLIFE in an article by Dr. F. S. Barkalow of North Carolina State College.)

Despite the many dangers through which quail must pass during the breeding season, the shootable surplus of birds in the fall is surprisingly large. Quail tend to produce more of their kind than local habitat can carry through the winter. This means that many of the birds in the field during the fall will have succumbed to environmental perils by the time a new breeding season is reached. The differential between the fall population and the spring breeding population is the surplus that may be harvested without endangering the total population. The percentage of birds which may be shot may vary from 40 to 80 per cent, depending on local conditions. It is simply a matter of using for food and sports, birds which might otherwise be killed by predators, disease, starvation, or severe weather.

The management of quail is largely the responsibility of wildlife administrators and farmers, but sportsmen have a very real responsibility too.

When not feeding, quail spend much time simply loafing around. (Photo courtesy U. S. Fish and Wildlife Service)

Sportsmen can completely destroy the quail population of a given section even though they adhere carefully to the rules on bag limits and seasons. All too often hunting parties have been guilty of shooting into a bursting covey and then shooting the scattered singles down to the last crumpled corpse. Such conduct is not only extremely poor sportsmanship; it is just plain stupidity.

The Wildlife Resources Commission of North Carolina has instituted a really sound and intelligent program of quail management. But this program will succeed only so far as it is actively supported by sportsmen and landowners. It is safe to say that once carried to its logical conclusion, the quail restoration program of this state can make it the best quail state in the country.

SIMPLIFIED BIRD PHOTOGRAPHY

A NATURE SHORT

By JACK DERMID

(Photos by the Author)

Successful bird photographs can be made without an expensive array of cameras and equipment. Providing that the enthusiast possesses a sufficient amount of patience, is blessed with abundant free time, and understands a few basic fundamentals of photography, almost any camera that will focus within three to five feet of a nest will suffice.

A long piece of string tied to the shutter of the camera enabled the photographer to photograph the robin by remote control.

The picture showing a parent robin admiring its newly hatched brood was taken with a folding camera, which cost fifteen dollars secondhand. Fast panchromatic film was used with an exposure of 1/100 second at f11. The other photograph reveals the camera setup. Since the nest was about fifteen feet above the ground, a large stepladder was employed, the board to which the camera is attached being nailed to it. The Kodak Optipod, a universal clamp and tripod head combined, is the necessary gadget for supporting the camera. A piece of string tied to the shutter release enables the photographer to make an exposure at the proper instant from a nearby vantage point.

A word of caution should not be amiss at this time. To avoid the possibility of a deserted nest, wait until the eggs have hatched before attempting photography. And do not alter the surroundings of a nest in any way that might attract predators.

It is fun to take bird pictures, especially if one can do his own film processing and enlarging. Besides, it gives one an opportunity to become intimately acquainted with the ways of wild creatures.

This photo was taken in the manner described in the article. It appeared in the March 1949 issue and caused so much comment that we are using it again with the article describing how such wildlife photographs are obtained.

THE WILDLIFE COMMISSION'S STATE WIDE INVENTORY

By William L. Hamnett

Project Leader, Statewide Wildlife Inventory

A BUSINESS dependent on renewal supplies, to be successful, maintains a series of inventories. With this idea in mind, the North Carolina Wildlife Resources Commission is conducting an initial statewide inventory of its game resources to ascertain what stock of wildlife it has on hand.

Briefly, the objectives of this Project, known as 20-R, are to take stock of the wildlife resources of the state; to set forth the factors which influence game production; and to lay the groundwork for future game management in the state.

At the present time there are four Game Resources Specialists and one Draftswoman assigned to the Project. Each has his or her particular assignment.

The field work is carried on by the Game Resources Specialists who work county by county in their respective districts. In general their plan of operation is as follows: County maps with transposed vegetational outlines, are appropriately colored according to the forest cover types. Sample areas in each of the distinct cover types present within the county are recorded by either the transect or quadrat method. This provides a record for analysis of each type's value to the indigenous wildlife species. The present and potential game ranges of bear, deer, turkey, beaver, and wild boar are deliniated on the field map. If the particular species is present the number associated with each range is recorded.

Modern mapping equipment is used to delineate cover types and wildlife distribution.

Twenty-four species of game birds and game animals, including a general grouping of waterfowl, are under consideration during the field work.

By means of interviews or contacts with each game protector, county farm agent and his associates, other State or Federal conservation agencies, landowners, farmers, and sportsmen, as well as by personal observations the presence and relative abundance of each of the several species of wildlife indigenous to the county is recorded on the appropriate form used by the field men. Along with the collection of wildlife data the field men obtain pertinent facts which may or may not have an influence upon the present and potential wildlife population; such as, geography and climate, agriculture and land-use practices, industry, human population, and hunting pressure.

The field men organize and submit their findings in a written report to the Raleigh office where it is reviewed and prepared in final form.

The map work of the Project is largely the responsibility of the draftswoman and is briefly outlined as follows:

A county highway map, scale 1" to 1 mile, is used as the base map. By means of an optical instrument called a "sketchmaster," contact aerial photographs, scale 1:20,000, are projected onto the map surface. The outline of the wooded or forested area is oriented to and drawn directly on the base map and then lightly shaded in. This differentiates between the open or generally cultivated land and the woodland of the county.

When the base map has been completed with aerial photograph data a blue linen tracing is made of the county outline, major roads, towns and drainageways. This tracing is retained in the Raleigh office and the base map is sent to the field man to whom that particular county has been assigned. He treats the map as has been previously

(Continued on page 16)

NORTH CAROLINA WILDLIFE

RESOURCE-O-GRAM

A ROUNDUP OF THE LATEST WILDLIFE NEWS

THE UNITED STATES SENATE HAS PASSED A BILL TO RAISE THE PRICE OF THE DUCK STAMP FROM ONE DOLLAR TO TWO DOLLARS, BUT FAILED TO PROVIDE FOR AN INCREASE IN THE PERCENTAGE OF DUCK STAMP FUNDS TO BE EXPENDED FOR ENFORCEMENT OF FEDERAL MIGRATORY GAME BIRD LAWS. SUCH AN INCREASE COULD BE ADDED TO THE BILL WHEN IT REACHES THE HOUSE—AND WILL BE ADDED IF ENOUGH SPORTSMEN CONTACT THEIR REPRESENTATIVES TO URGE SUCH ACTION. BETTER LAW ENFORCEMENT FOR WATERFOWL AND DOVES IS BADLY NEEDED.

TWO FISH SURVEY PARTIES ARE WORKING ON STREAMS AND RESERVOIRS IN THE WESTERN PART OF THE STATE. DR. JOSEPH BAILEY OF DUKE UNIVERSITY IS HEADING A PARTY TO SURVEY TROUT AND SMALLMOUTH BASS STREAMS IN NORTHWESTERN COUNTIES FOR THE PURPOSE OF LAYING OUT PLANS FOR FUTURE STOCKING. THIS WORK BEGAN IN THE NEW RIVER AND ITS TRIBUTARIES. ASSOCIATE FISH BIOLOGIST EDWARD HUESKE, FAYETTEVILLE, IS WORKING WITH TVA BIOLOGISTS TO SURVEY THE RESERVOIRS ON THE YADKIN RIVER TO DETERMINE FISH AND FISHING CONDITIONS IN THESE WATERS.

FOUR NEW MEMBERS OF THE WILDLIFE RESOURCES COMMISSION HAVE BEEN SWORN IN AND THE COMMISSION HAS ELECTED NEW OFFICERS. SEE TOP OF PAGE THREE, THIS ISSUE, FOR NAMES OF NEW COMMISSIONERS AND NEW OFFICERS.

THE WILDLIFE COMMISSION'S FIELD STAFF IS BEING AUGMENTED BY ADDITIONAL PERSONNEL. FRANK B. BARICK OF THE PENNSYLVANIA STATE GAME COMMISSION HAS BEEN HIRED TO HEAD UP AN EXTENSIVE BIG GAME MANAGEMENT PROGRAM WITH EMPHASIS ON DEER MANAGEMENT; REYNOLD A. FREDIN OF IOWA STATE COLLEGE HAS BEEN EMPLOYED AS ASSOCIATE FISH BIOLOGIST, WILL SERVE AS A TECHNICAL ADVISOR ON FARM FISH POND MANAGEMENT AND ASSIST DR. WILLIS KING, CHIEF OF THE FISH DIVISION, WITH FISH MANAGEMENT WORK; DAVID C. THORNTON OF MICHIGAN STATE COLLEGE WILL HELP COMPLETE THE STATEWIDE WILDLIFE INVENTORY (SEE PAGE 10 THIS ISSUE) AND TRANSFER TO THE COMMISSION'S FARM GAME PROGRAM.

DESPITE HEAVY RAINS OVER THE STATE DURING LATE JUNE AND EARLY JULY, MOST WILDLIFE TECHNICIANS BELIEVE THAT AN ABUNDANT QUAIL CROP MAY BE EXPECTED THIS FALL. RAINS MAY HAVE DONE SOME DAMAGE TO NESTS IN FLOOD AREAS, BUT CAME AFTER THE PEAK OF THE QUAIL NESTING SEASON.

PERSONNEL OF THE N. C. WILDLIFE RESOURCES COMMISSION WILL COOPERATE WITH THE N. C. AGRICULTURAL EXTENSION SERVICE AT ITS TWELFTH ANNUAL 4-H CAMP IN THE HOFFMAN FOREST ON AUGUST 23 AND 24 BY GIVING INSTRUCTIONAL INFORMATION ON THE WILDLIFE RESOURCES OF THE STATE. FURTHER COOPERATION WILL BE EFFECTED WITH THE COLORED 4-H CAMP AND THE STATE FOREST SERVICE SUMMER CAMP.

1949-1950 HUNTING LICENSES ARE NOW ON SALE AT LICENSE DEALERS. COPIES OF THE 1949-1950 HUNTING REGULATIONS WILL BE DISTRIBUTED WITH LICENSES AT TIME OF PURCHASE. THE PRINTED REGULATION EXTRACTS CONTAIN A BRIEF SUMMARY OF WILDLIFE LAWS AND WILDLIFE COMMISSION REGULATIONS IN ADDITION TO DATES AND BAG LIMITS ON GAME SPECIES. WATERFOWL REGULATIONS WILL BE ISSUED SEPARATELY.

SOME NORTH
GAME F

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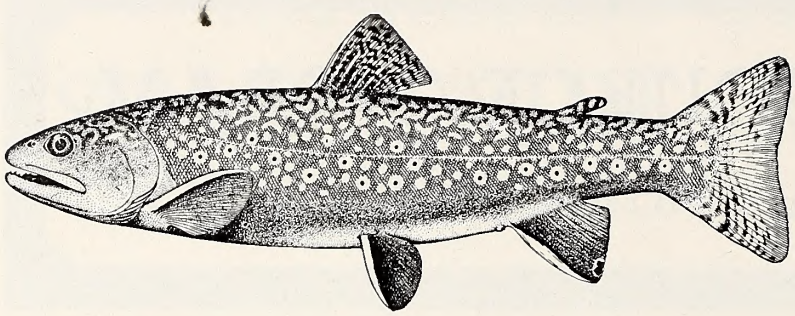
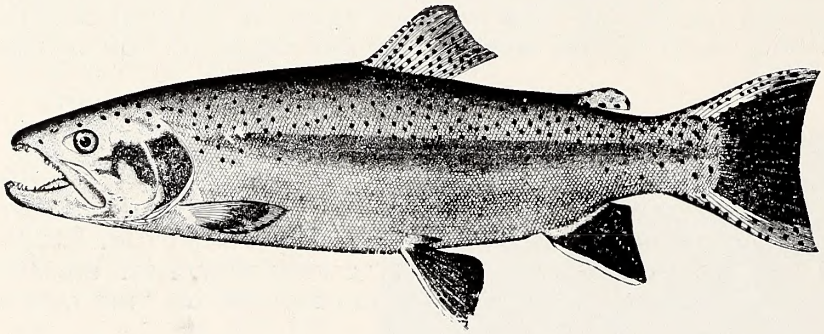
The fish shown on these pages are described and discuss in a of North Carolina" by Dr. Willis King. Copies of this l in coin to the N. C. Wildlife Resources Commission, B

BROOK TROUT



RAINBOW TROUT



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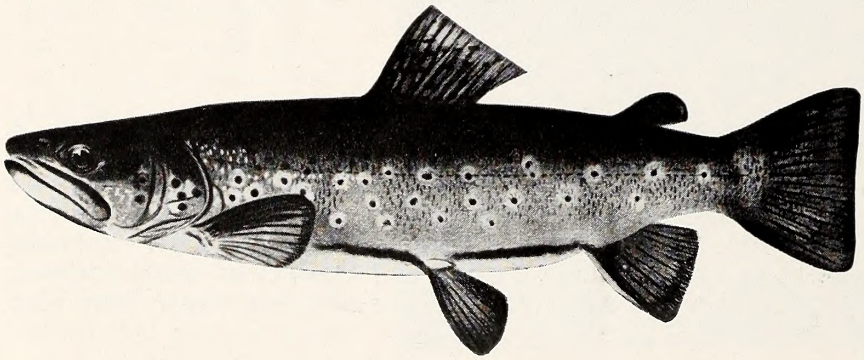

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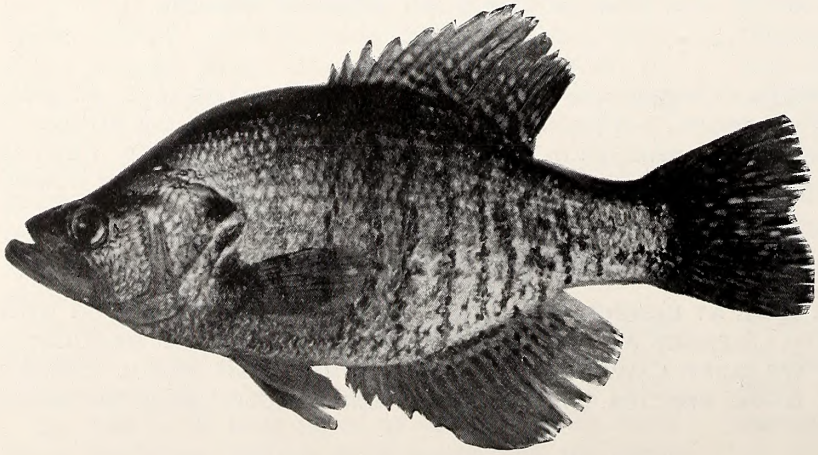

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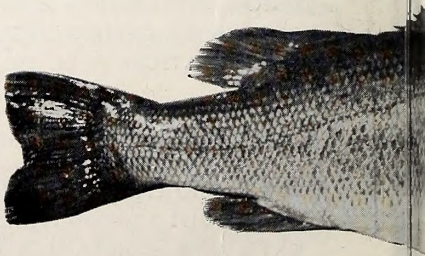
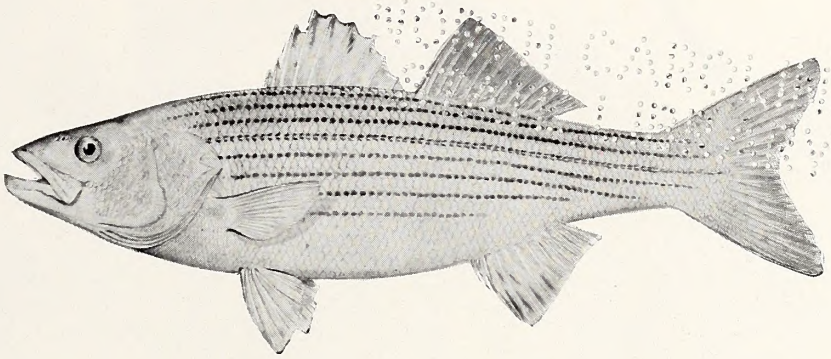


CAROLINA FISH

t of Fishermen)

in a booklet entitled "Important Food and Game Fishes klet (54 pages) may be obtained by sending 25 cents 2919, Raleigh.

STRIPED BASS



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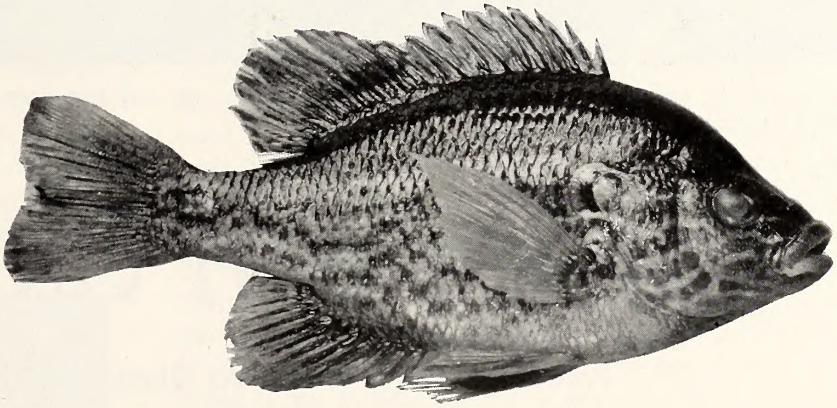

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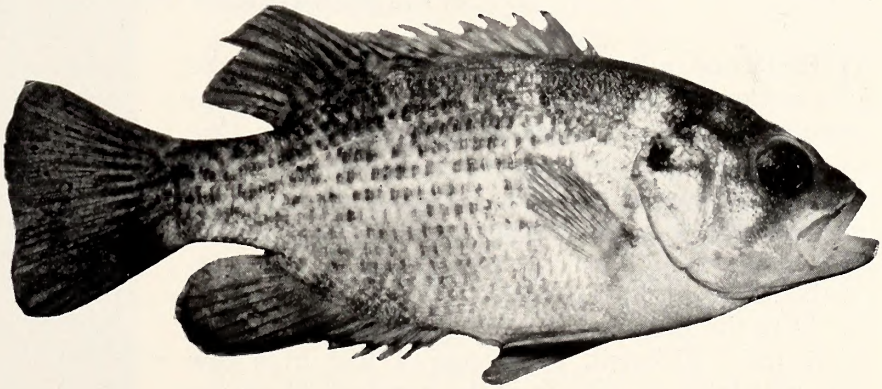

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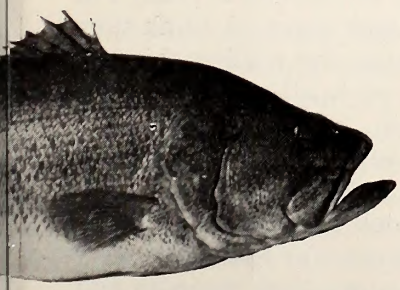

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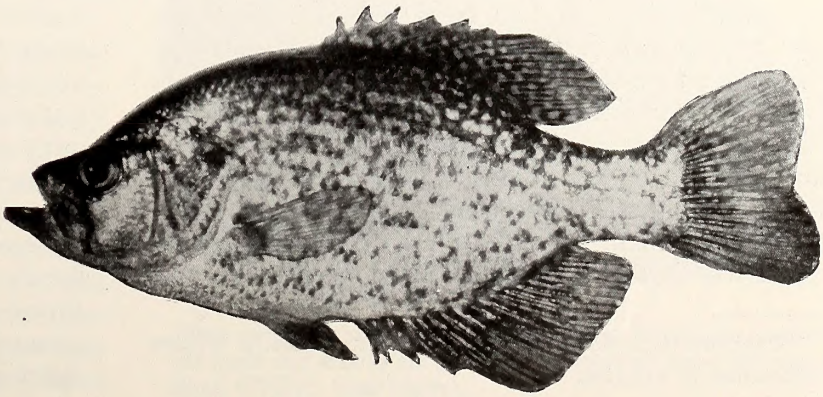
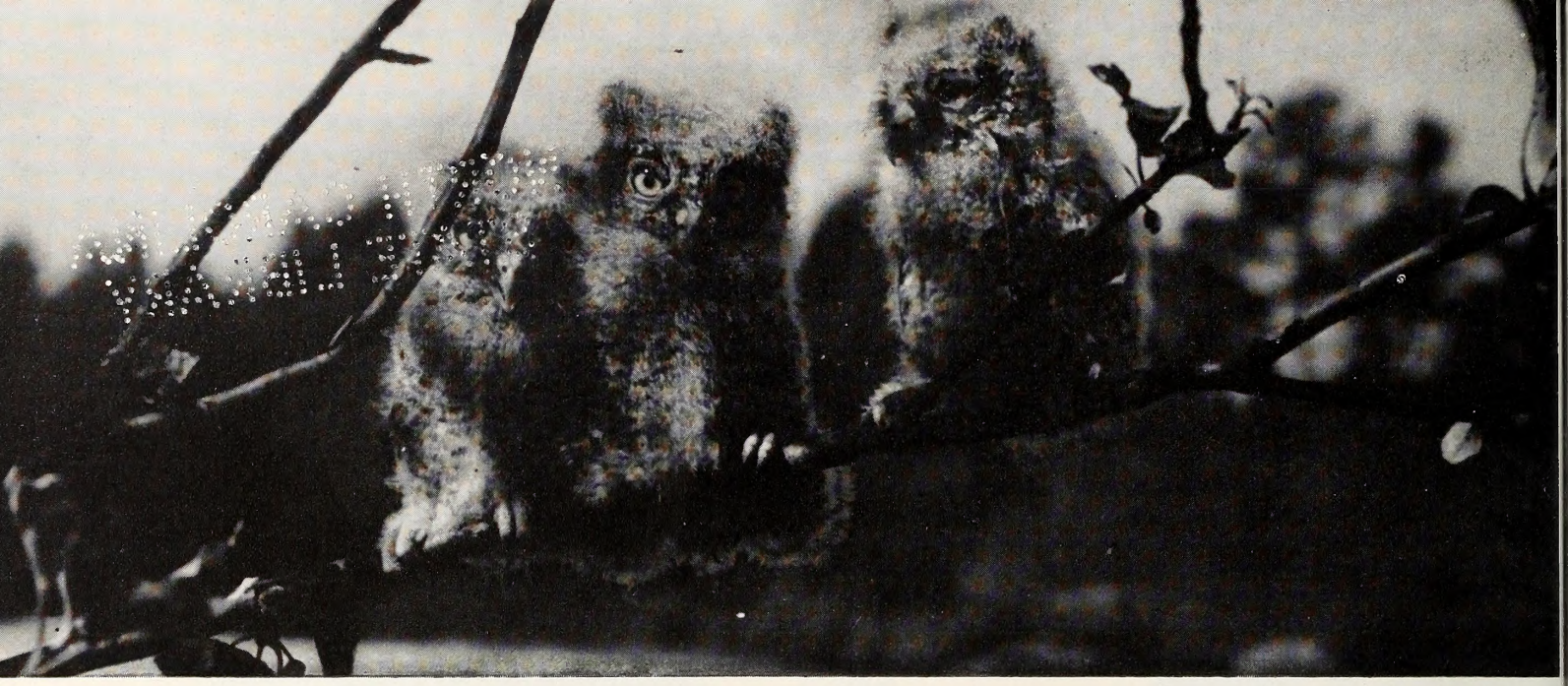




These young owls will grow up to be predators, but the rats and mice they will consume will far out-weigh any harm they may do by taking quail or rabbits.

A NEW SLANT ON PREDATION

Predators May Not Be As Black As They Have Been Painted

By Werner O. Nagel,
Administrative Assistant of the Game Section of the Missouri State Conservation Commission

THERE have been quite a few outbursts on the predator question of late, in OU* as well as in popular outdoor magazines. I think that is fine. The more information that comes out of this important matter, the sooner it can be threshed out to everyone's satisfaction and acceptance of rational predator management. There certainly are a lot of angles to this problem; in the current OU, you had one letter from the East and one from the West, and they were quite different. Now, may I toss in a few thoughts from the middle of the country? There are some things that weren't mentioned that might also be of interest.

The first thing that strikes me is that so far this particular argument has been kind of one-sided. The sportsmen's side is being heavily represented; the game manager's is not. That's natural, since neither OU nor the outdoor magazines are technical publications. Maybe it's natural, too, that game management and the technicians should be put on the pan. It is a little peculiar, though, to see them panned so much, since the work they do is almost exclusive in the interests of the sportsmen. You know, I sometimes think that if they didn't have something — something like sincerity, a conviction that the "right will triumph," and a glimpse of the gradual but encouraging swing-over to their side— the technicians would have been discouraged long ago by the continued barrages from those who you might reasonably expect to be their strongest supporters.

NOW the above isn't exactly on the subject of predators, but it suggests that maybe the men who have spent years in impartial analyses of the lives of the wild creatures may have a point or two on predation that many sportsmen may have overlooked. Without going into the matter of food-habits studies (these are available for anyone to read) I'm going to present a few of those points. I think they are important, if only because the whole subject is important—to sportsmen, and to all of us, whatever our outdoor interest may be.

The time is 1931-32; the scene, a couple of management areas totalling about 2,127 acres. The Conservation Department undertook to eliminate *all* predators on these two small areas. For two years, they threw everything that both practical trappers and science could devise at the predators—trapping, snaring, killing—never letting up. At the end of

*"Outdoors Unlimited"—official organ of the Outdoor Writers Association of America.

those two years, they checked up the result. In their own words (my italics) "Elimination was *markedly* successful on the long-eared owl, marsh hawk, and crow. Species that have shown *little or no* reduction (and mark these, you that know your really successful predators) included the Cooper's hawk, sharp-shinned hawk, red fox, gray fox, skunk, domestic cat, red squirrel, and raccoon."

That was the best job that all-out effort could do on a small acreage, in two years. It shows that if "complete" or just "moderate" reduction of the really efficient predators was wanted, it would be a darn sight harder to get done—on a large scale—than to say it ought to be done. I don't say that it couldn't be done, but I do say that, based on the results of this experiment, it would take more men and money to eliminate predators in New York than the State of New York could muster. That's regardless of whether you agree it ought to be done or not.

The more you dig into this predator business, the more meets the eye.

ANOTHER thing that meets the eye is that conditions differ, from one part of the country to the next. Predator problems in Idaho, described by Elmer Keith, are quite different than predation in the East. It's a different type of country, deals with different species—Keith describes the effect of big predators on game. The problem is far from simple; there is the wide and rugged country, and the economic conditions, both of which add up to the fact that the predators aren't being harvested. It's swell country for them—lots of food, and good protection. In settled country, most of the small predator species have their own natural enemies; in Keith's country, if man isn't going to kill the surplus coyotes and cougars, what is? Big bounties might do the job there—but in addition, don't you think the *hunters* might well get busy in their own interest? Help whittle the too-many predators down to just enough? Charlie Gillham ran into the same over-abundance of big predators in Alaska, and here, too, it looks like man had better take a hand—to help control excess predation.

Careful analysis of the contents of predators' stomachs (a fox in this case) has proven that most predators are not as noxious as they were once believed to be. (W.R.C. Staff Photo)

Let's take a trip to Hawaii now, with Charlie Schwartz. A quick look at the islands shows some with heavy predator populations that are also teeming with game; shows others with no predators, and little or no game. Naturally we don't find any with lots of game predators and *no* game.

THE best quail territory is also infested with mongoose—that imported Indian terror who'll wipe out a whole covey while a fox is getting one bird. Yet the quail prosper. They do so because the food, cover, etc. conditions are so good that they get along quite well regardless. Meanwhile the mongoose is killing a lot of rats, too. The Hawaiian authorities have tried to wipe out the mongoose, but they've failed. But, as far as saving quail is concerned, they can get the same effect by improving cover for quail. That *can* be done, and it can be done in a way that makes good land use sense, too. The same thing is true in many areas in this country, where cover restoration is the cheapest, fastest, and only practical method of predator control.

Swinging down, now, to Australia, we find they've really got troubles. Rabbit troubles—lots of rabbits, and no predators to keep them down. There are so many rabbits that livestock have a hard time finding enough to eat. In some places rabbits have eaten the vegetation down so close that deserts are forming. Maybe we should ship some of our predators to Australia; they sure need some good ones. Only trouble is, in a little while we'd want them back.

LET'S go to Missouri, now, for still another angle. Here we'll find red and gray foxes, coyotes, coons, skunks, hawks, crows, minks,—all of the well-known midwestern predators and a very high

Foxes are probably North Carolina's most important predators, yet quail and rabbits are abundant in areas of heavy fox populations. (W.R.C. Staff Photo)

Sparrow hawks may take small birds, making them predators. But because they eat so many insects and other pests, they are on the protected list.

crop of several of them. We have predator problems, indeed, but I don't think you'll find more than a radical handful to say we could get along without predators. You'll find lots of people to admit we could do with less of some of them. The biggest problem is damage to poultry and livestock—not game. That problem is handled on the basis that the farmer is in the very best position to control predators, on his own land, in protection of his own property. So through a trapper-training program, interested farmers are trained to catch the individual predators that are doing him damage. Those individuals number a small part of the predator population; the rest aren't harming the farmer at all. You can catch a few individuals of almost any species easily —why not pick on those that are actually doing the damage? It works.

These are only a scattered few of a lot of angles on predators and control. There's the angle that predation is the only insurance that no one species will become too numerous and overrun the earth. There's the fox-eats-mouse angle, which is by no means to be despised. There's the fact (that we're just beginning to appreciate) that *when predation becomes the chief factor in wiping out a game species, that species has outlived its environment.*

THEN there's the human angle—peculiar twist that makes a sportsman's heart bleed with pity for a quail killed by a predator, and beat with pride when he himself manages to do the trick. That makes an animal fulfilling its place in nature's scheme a "murderer," and a hunter taking the life of a creature he doesn't actually need, a "sportsman." Don't get excited—I'm all for hunting and strong for sportsmanship—but do we have to kid ourselves about it? Is our fury at predators a kind of self-justification for ourselves? True sportsmanship doesn't need that kind of self-justification.

There are a *lot* of angles. Every situation has to be worked out according to its own conditions. In doing this, it helps quite a bit to have the facts.

Food habits studies, and the principles by which nature works are facts—much more dependable than prejudice and jumping to conclusions from chance observations. No one has all the facts about predation, but students of natural principles know this much: The power of life to reproduce itself is the most fundamental of all urges. It is a force of such terrible potential that if it were released in even the most insignificant species, all other species would soon fall before it. It has only one check—death. And, in nature's scheme, predators are Death's first line of defense. At the least, we can admit that the natural principle of predation represents a power that takes some careful handling, by the people that know the most about this power.

And that's a fact.

'Possums are predatory animals, but because of the value of their fur and the fact that they are considered game animals, they are protected by law. (W.R.C. Staff Photo)

(Continued from page 10)

described and returns it with his written report of the county to the Raleigh office. Then on the blue linen tracing the colored cover types of the base map are indicated by appropriate Zip-A-Tone symbols. Present plans call for the final map being prepared in progressive steps which include a white linen tracing of the blue linen, an oznaprint, a photo-positive, and a final black and white map, scale 1″ to 1 mile.

I WAS AN OUT-OF-SEASON HUNTER

For Obvious Reasons, this Story Is

ANONYMOUS

ALTHOUGH squirrel season doesn't open here in West Virginia until mid-October, I was munching on the hind-quarter of a fried squirrel in early September. A fellow worker had given me the choice meat from his lunch bucket. He had been bringing squirrel out in his lunch for the past few days.

I'll call my friend's name just "Joe."

"Must be lots of squirrels this year," I remarked, flipping a lead shot from the nearly finished ham. "But, Joe, aren't you afraid of getting caught, hunting out of season? It's more than a month yet until the season opens."

"Heck, no," Joe said, grinning. "Where I go, you'd never see a game warden. And the squirrels are thicker than hair on a dog's back. They're cutting on hickory—I got six last Sunday."

Now I like squirrel hunting, and my fever was getting up. Somehow I had never thought about hunting out of season or had the nerve. "You'd never see a game warden," Joe had said. I assured myself that the conservation commission was wrong anyway, opening the season too late. Squirrel hunting was no good last year. Might as well get mine before the others get 'em, I convinced myself.

Since I had to work half a day on Saturday, I decided to sneak out Sunday morning to some hickory flats I knew of.

Still I had a little squeamish feeling of guilt, so I didn't tell my wife. I didn't get up too early. I had hidden my gun in the back seat of my car the evening before while my wife was washing dishes.

I headed out of town that Sunday morning. People were already starting to church. A little guilty feeling began to creep over me. But I shrugged that off by stepping on the gas.

When I hit the creek road I felt better. The big beech and hickories that fringed the road gave me that old eager feeling. About 4 miles up the creek I stopped at a small hollow where I hunted the year before—in season. Pulling off the road, I got out casually and listened, looked up the road and down. I remembered that the nearest house was at least a mile away. I put a few shells in my pocket and hurried up the small hollow.

I soon gained a small flat bench in a grove of hickories. I sat down on a rock. I could see the squirrels had been working on the hickories. The cuttings were thick, white and fresh. The woods were very quiet. The distant booming of a grouse seemed to accent the quietness. It was a beautiful day, with only a slight breeze stirring. A far-away church bell reminded me awkwardly that it was Sunday.

I felt sure I'd see a squirrel shortly. The conditions were perfect. On the creek road below, I heard a car pass. It seemed to go on, but I wasn't sure. Suppose it was a game warden? He would certainly see my parked car and he would get suspicious. After all, these officers knew people were hunting out of season. I caught myself glancing down the hill. Once I froze in fear. I saw a movement behind a beech tree down the hill! Then I saw, with relief, it was only a bush bending to the morning breeze.

Uneasily, I picked up my gun and quietly moved around the flat. I heard another strange noise. My nerves were getting on edge. Suppose I got caught? Hunting out of season, hunting on Sunday—my name in the paper . . .

Suddenly a squirrel started barking—a noise I did recognize—and close. Not more than 30 paces a big grey was sticking on the side of a big shellbark hickory, scolding me.

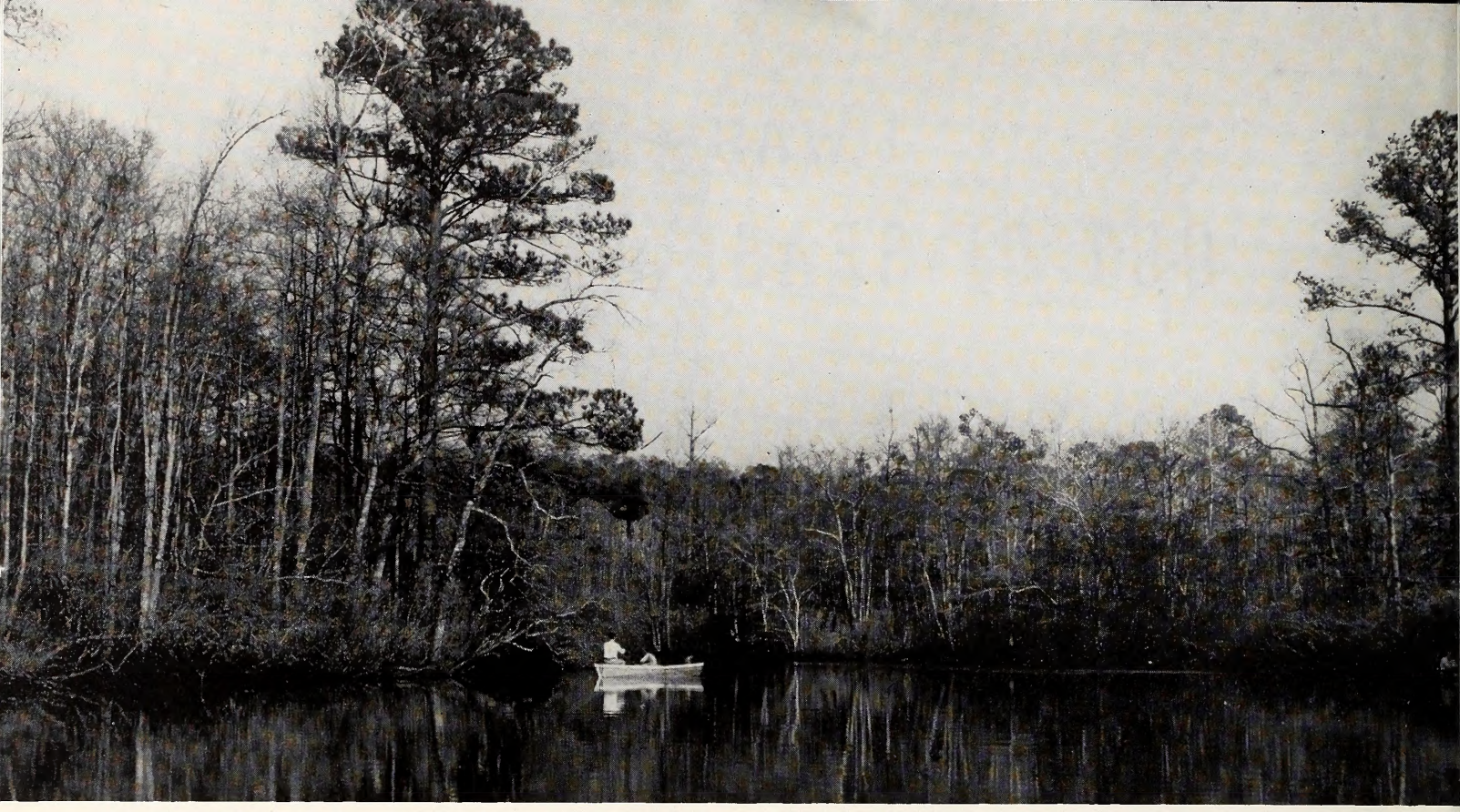
Instinctively, I raised my 20 Ga. shotgun, released the safety, trembling a little, and fired. The report of the gun sounded like a cannon. A shotgun, I thought, sounds like a peal of thunder on Sunday.

The squirrel just hung by its foot for a few seconds, twitched, then fell to the ground. I looked around good before going over to get my squirrel. That "old eager feeling" wasn't there. I was scared.

Hurrying over to my prize, I picked up the squirrel. It was very warm, and, from habit, I held it up for examination. It was a female and its teats were fresh with milk. I could still see the small, moist rings around the nipples where its young had been nuzzling, perhaps only a few minutes before.

I felt like a murderer, not a hunter. A nest of young, helpless squirrels would slowly die of starvation, simply because I, and the other of my clan, refuse to listen to game managers, the law, or be sportsmen.

My conscience is my punishment.



Bluegills, or bream, are found in abundance in the quiet, dark waters of North Carolina's Coastal Plain. (W.R.C. Staff Photo)

North Carolina Bluegills

Call Them Bluegills or Bream, They Are Sporty Scrappers

Ounce for ounce, bluegills compare favorably with the gamest of game fish. For sheer strength, speed, and stamina, a 12-ounce bluegill is unexcelled by any other species. Bluegills, or bream, as they are commonly called in the South, are to the small boy what the largemouth bass is to seasoned anglers. They are one of the most popular of freshwater fish, both for their game fighting and for the delicious flavor of the firm, flaky flesh.

DESCRIPTION

There are two sub-species of bluegills in the Tarheel State, the common bluegill, *Lepomis macrochirus macrochirus,* and the southeastern bluegill, *Lepomis macrochirus purpurescens.* The two are similar in shape, being oval or almost round in outline, with younger specimens more elongate. The body of the fish is laterally compressed, but thicker than some of the other sunfish. The common bluegill ranges from a dark olive green over the back to yellow or brassy color toward the lower part of the body. There are several dark bars running vertically along the sides. There may be an extreme color variation among different individuals, but usually the females are lighter in color than the males, with yellow or orange hues on the throat and lower part of the body. The males are darker, often with deep orange or reddish breast. Sometimes the vertical bars are not visible when the fish is out of the water.

The southeastern bluegill is the larger of the two species, and much darker in color. The males may be a deep purple-black over most of the body, with orange hues about the breast, and a copper-colored band across the head. The females are less deeply colored with more yellow in the underparts and do not have the copper band over the head as is found in the males.

DISTRIBUTION

The common bluegill is native to the eastern and central parts of the United States, but has been successfully introduced to every state in the country. In North Carolina it is native to only the streams which feed into the Mississippi basin, but has been stocked in most of the rest of the state. The southeastern bluegill is native to the coastal plains of the southeastern states, but has been distributed from hatcheries to waters farther inland.

Both types of bluegills are typically pond fish, but may be found in many streams and small creeks or branches; because of their adaptability, one can expect to find them in almost any unpolluted body of fresh water except the swift mountain streams.

BREEDING HABITS

Bluegills are extremely prolific, and once established in a pond or a stream, will persist despite heavy fishing pressure. The spawning season lasts from May to September, and patient observers can enjoy watching the spawning activity. Bluegills perform an activity commonly called "bedding" which can be observed around the margins of ponds where the water is shallow and clear. The male fish use their fins to sweep away silt and vegetation to expose the underlying gravel or hard sand. Thus a clear area varying from a few inches to several feet in diameter may be exposed. Usually the beds are located in groups, sometimes as many as fifty in a relatively small area. On a still day the adult fish may be seen standing guard over the bed, and if startled from their post, will soon return again.

In these beds from 1,000 to 10,000 eggs may be deposited, depending on the size and physical condition of the female. The males fertilize the eggs as soon as they are deposited, and the vigil over the nest or bed continues until the eggs are hatched.

Young bluegills grow very rapidly when food is plentiful, and are capable of reproducing by the second summer of their life.

The common bluegill is of a lighter color with a suggestion of vertical bars along the sides, while . . .

FOOD HABITS

Bluegills have relatively small mouths, and for this reason their food is limited to the smaller animals of a pond or stream. Insects are the preferred diet, and bluegills may be seen on a still evening rising to the surface to take mosquitoes, mayflies, or any other insect which may happen to alight on the surface. Grasshoppers are a favored item, and where these insects hop into the water along a grassy shore, one can be sure to find bluegills lying in wait for them. Small crayfish, fairy shrimp, and other crustaceans form an important part of the bluegill menu, and small mussels may be taken in numbers as well as snails.

MANAGEMENT

Because of their extreme adaptability to varied conditions, bluegills do well in any suitable pond or lake. For this reason they are a favored species for stocking farm ponds and other small bodies of water. Usually bluegills are stocked with black bass in proportion to the size and carrying capacity of the water. Because of their prolificacy, bluegills provide food for bass, and at the same time may be fished heavily without danger of reducing the population to a serious degree.

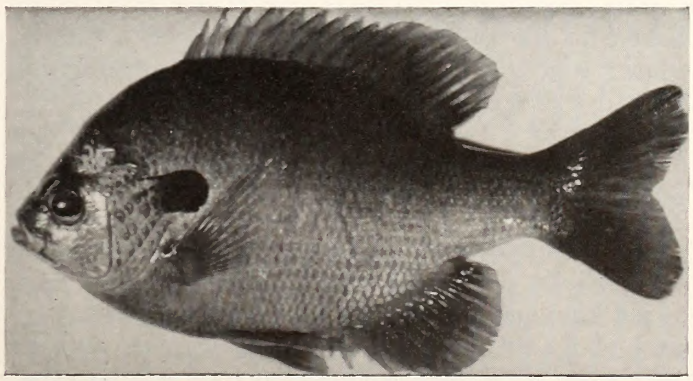
BAITS AND ANGLING

The wide variety of baits which appeal to bluegills is one reason why they are so popular as a game fish. They will take a variety of live bait, ranging from earthworms to catalpa worms, beetles, grubs, grasshoppers, bee larvae, small bits of clams, crayfish, and even doughballs.

The methods of taking bluegills are almost as varied as the baits these fish will accept. Bluegills are a favorite with flyrod anglers who may use any of the natural baits or flick an assortment of flies, popper minnows, and other artificial lures.

In the eastern part of North Carolina where bluegills are a favorite sport fish, many people use a slender cane pole with a gut or nylon leader short enough to be maneuverable and long enough to put the bait into the desired water. Bobblers and sinkers may be used, the length of the line below the cork being adjusted according to the depth of the water. Bluegills sometimes travel in schools and a patient angler can get his legal limit from a single school. Although not a very sporting proposition, a clever ruse has been used to keep in contact with the movement of a school of bluegills. The angler takes the first catch and attaches one end of a length of string to the lower jaw of the fish and the other to a toy

(Continued on page 21)



. . . the southeastern variety is very dark in color with a brassy streak over the head. There is much variety in coloration between sexes and species.

I DON'T BELIEVE IT!!! HOW ABOUT IT??

IS IT TRUE?? HERE IS YOUR CHANCE TO—

GET IT OFF YOUR CHEST!

EDITORIAL COMMENT, LETTERS TO THE EDITOR AND ANECDOTES

Conducted by Win Donat

By the time you read this, the firecrackers and rockets will be nothing more than charred bits of paper lying around. The noise and bright lights are gone for another year. Sometimes I wonder if we don't put on and take off our enthusiasm for our sports of hunting and fishing in about the same way we celebrate the Fourth of July. A month before the season comes in interest runs high and the brotherhood of nimrods begins to gather. During the season, school's out, and some play according to the rules and others—you know the answer. After the season, memories last for awhile and like the last puff of a roman candle, we are through until the next time.

There's more to our fun than merely taking. Our interest must be a continuing thing. One way to keep interest fresh and alive is to take an active part in the conservation battle during the off season. How about you readers making some suggestions as to how we could make this page more interesting? What do you think would be the best way to make this the SPORTSMEN'S PAGE?—W.D.

The next four questions are taken from many asked by the pupils of Johnston County's Consolidated school and they represent the interest and curiosity of our future citizens of America:

Why do bats fly only during the night?—Miss S. A. C., 6th grade.

Bats are creatures of the night, or nocturnal in their habits. They are most active just before dark when they catch insects on the wing. Bats very seldom fly into an obstacle in their path because they emit very shrill sounds, so high pitched that man's ears cannot hear them. These sounds bounce back from an object in the bat's line of flight just as a rubber ball thrown against the wall and are heard by the bat in time to permit it to change its course. Man uses this same principal in his navigation device which we know as radar.

Why does the whip-poor-will have whiskers?—Miss N. J. L., 6th grade.

This interesting bird, as well as many of the others that catch insects on the wing, have whiskers around the mouth as this device acts as a sort of funnel or net which helps to direct the insect into the mouth.

How many different kinds of birds are there in North Carolina?—Miss J. A. N., 5th grade.

Counting all those species that have been reported as visiting this state infrequently as well as those that are regular visitors such as the waterfowl, it has been estimated that very nearly four hundred species of birds are seen in North Carolina. It might be added that this is a resource of great value and well worth protecting.

How many otters were caught in North Carolina during the 1948 season and what was their fur worth?—G. R., 5th grade.

Our check shows that there were over eight hundred otter skins handled by fur buyers last year and at an average value to the trapper of twenty dollars each they represent a source of income to many of our people which, under care and management, can be increased to an even greater extent. The season for trapping otter this year will be shorter than that for mink and muskrat but this is one way to build a larger supply of these fine furbearers.

When hunting crows, is it permissible to use shotguns having more than three shells in the magazine and chamber?—O. D. B., Brevard, North Carolina.

Yes, there is no three-shell limit for guns while hunting crows only. While we are on this subject, I'd like to see some one start a crow hunting contest to decide the individual crow hunting champion as each section has its brag hunters. How about it? Will someone start it? I'll help.

I wonder if you could tell me what kind of fish my father-in-law catches around Asheville. He claims they are trout. In Pennsylvania the trout we catch have no scales. The fish he catches have scales.—Sgt. R. F. M., Vet. Det., Fort Bragg, N. C.

This is a new one! All of the authoritative writings I have seen on the trout to be found in North Carolina make a specific point of describing the size, shape, and number of scales in a line on brook, rainbow, and brown trout. While it is true that the scales are small, nevertheless they do exist—unless the excellent Pennsylvania Fish Department has found a way of growing them without scales.

Can you tell me what is the largest bird to be found in North Carolina?—Mrs. M. J. L., Raleigh, N. C.

This question has several aspects. Do you mean the largest by weight of all birds found in North Carolina or the largest wingspread? Probably the largest by both weight and wingspread would be the whistling swan which is, of course, migratory and found here only in the winter season. Of the native birds, the wild turkey is the heaviest and the bald eagle has the greatest wingspread. Large swans will weigh up to thirty pounds and have a wingspread of almost six feet. The wild turkey seldom goes over twenty pounds and the eagle may have a wingspread of six feet or more.

Why don't we have more protectors than just one to a county? It seems to me that if game had more complete protection it would thrive.—M. J. R., Raeford, N. C.

Strangely enough we have thousands of protectors in each county, only some of them do a good job and the majority of the others allow the few to do it almost alone. We spend approximately thirty-five per cent of our present budget for law enforcement. Increasing this amount would impose a serious handicap on the other activities of the Commission. Since you—the citizens—individually and collectively own the game, all we can ask is that you *help us* to protect YOUR interests in much the same way you now would protect your homes and other property from theft and malicious damage.

(Continued from page 19)

balloon or some other very light, bouyant object. The theory is that the fish returns to the school and follows it about the pond, with the floating balloon clearly marking the location of the fish.

Bluegills are at their toothsome best when freshly caught, but properly packed in ice, they may be transported many miles on a hot day without losing much of the flavor.

There are a number of ways of preparing bluegills for the table. Because of their relatively small size, the sharpness of their dorsal spines, and the compact arrangement of the scales, bluegills are somewhat difficult to dress. Scaling may be speeded by using an unique method. The fish are picked up by the lower jaw and immersed for a few moments in a bucket or kettle of scalding water. This turns the covering film to a dull gray, and loosens the scales so that they may be slipped or rubbed from the fish in a vessel of cool water. A few attempts may be necessary to determine the time required to loosen the scales by scalding without parboiling the flesh, but once the trick is learned, dozens of bluegills may be scaled in a few minutes.

When the scales, fins, head, and internal organs have been removed, the fish may be rolled in flour, cornmeal, cracker crumbs, or any similar preparation, and fried. Bacon fat adds a tangy flavor, although lard or any cooking oil may be used. A "mess" of bluegills fried over an open fire beside the pond or stream is a delicacy which must be experienced to be appreciated.

SENATE COMMITTEE RECOGNIZES STATES' RIGHTS ON NATIONAL FORESTS

Recognizing the rights of the various states to regulate hunting and to manage big-game herds on the national forests, the Senate Committee on Appropriations recently stated that any new legislation that could be passed would cause duplication of effort and impair a cooperative agreement of long standing.

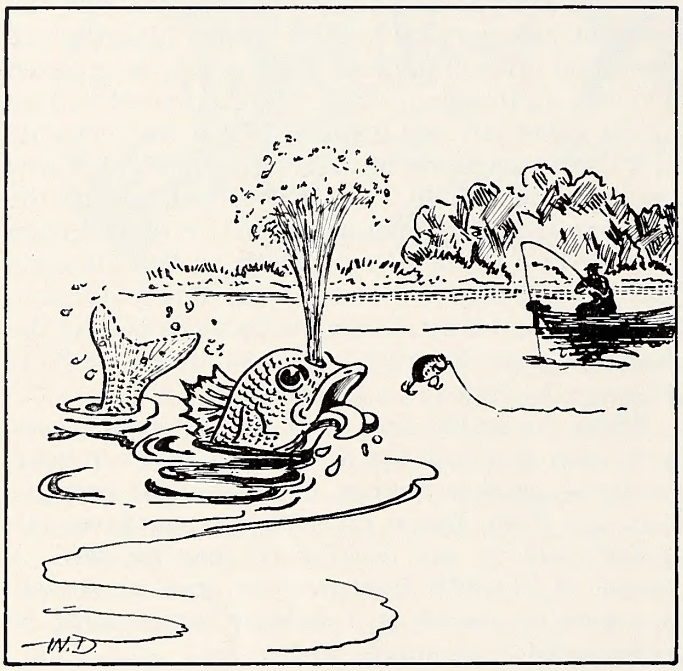
The House Committee had recommended that the Forest Service should consider recommending legislation to authorize them to issue hunting licenses, fix bag limits, and to use other means of controlling overpopulations of wildlife which are harming ranges. The Senate Committee pointed out that the Federal Government already has such authority and that additional legislation is unnecessary. It feels that the long history of close understanding and cooperation between the Forest Service and state agencies concerned with the administration of fish and game should be continued. The maintenance of appropriate wildlife populations on national forests through proper game management, the Committee said, is one of the most fruitful ways of making available to large numbers of people the benefits of national forests.

OLD HOLE-IN-THE-HEAD—By Jay Breen

We are indebted to the New York Bureau of United Press for this bit of hot-weather reading.

You could have knocked Bob Durrenberger over with a bamboo rod and reel when he saw this fish come down the creek spouting water out of the hole in its head.

Bob had been fishing for many a year and never had he seen anything like that.



He'd also had to listen to a lot of dull fishing stories in his time, too. A dull fishing story, as you may know, is one a fisherman has to listen to, instead of tell.

"Well," Bob says, "I saw this big critter come plowing down the creek and every once in a while it shoots that jet of water out of the top of its head. It's tan and cream colored, sort of mottled looking and has blue eyes and when it gets closer I notice it has portholes in its side, just like a submarine."

Bob started praying. He says: "I knew if I didn't catch that fish everyone who ever heard me talk about it later would just laugh at me."

Bob knows how it is. Many's the time he's spread a smirk across his face when another angler started waving his arms to indicate the size of the one that got away.

He says: "I was so nervous my fingers were shaking, and I had to switch over from a fly to a hook."

He got the job done, though, and dropped that hook square in the fish's hole in the head.

When Bob got home, he parked the car and simply bellowed at Mrs. Durrenberger. "Get a bucket of water," he screamed, "I've got the all-time record fish."

Mrs. D.—Charlotte is her name—says "I was in a panic. I couldn't think whether I had a bucket, so I emptied the diaper can and brought that out."

She says she was just a little horrified when she saw the fish.

Charlotte is quite a fisherman in her own right and many's the time she's gone out with Bob and come home with bigger and better catches than he got.

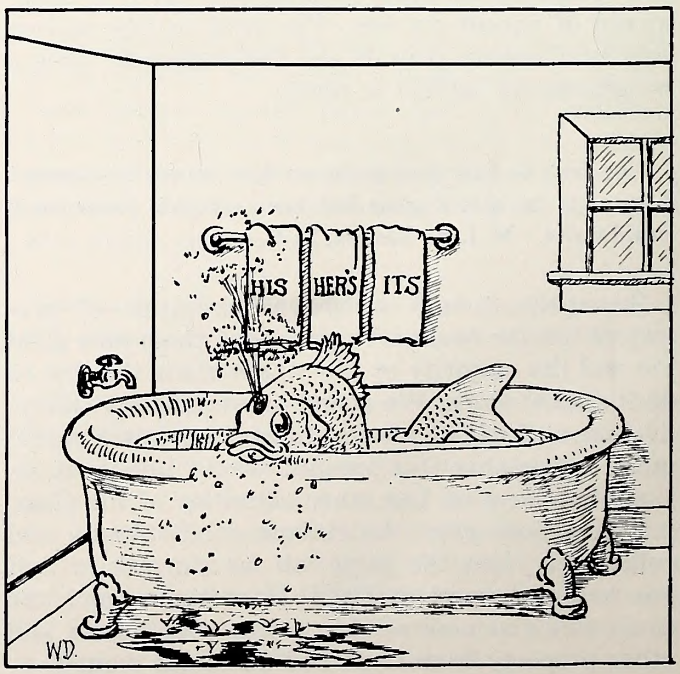
She gave the fish one look in its big, blue eyes and then tried to ignore it. That's been hard, though, because old "Hole in the head" has taken up quarters in the Durrenberger bath tub.

Bob is in seventh heaven. He's calling up everyone he ever knew to come take a look at what he caught. All day long the Durrenberger house, in Fair Lawn, New Jersey, is filled with wide-eyed men striding toward the bathroom and pop-eyed men walking out. Among them are experts who can't identify his catch.

"Old hole in the head" swims around the tub, spouting water through his forehead and giving everyone a cold, fishy blue eye. Bob's fish has one other unsettled attribute, beyond his portholes and hole in his skull. He also has cup-like discs on his tail, which he uses to climb the side of the tub.

Usually he stops alongside the soap dish, but Charlotte says it's enough to make your hair stand on end to walk in the bathroom and see "hole in the head" staring at you over the rim of the tub.

Bob's three-and-one-half-year-old daughter was terrified the moment she saw the fish and has severed all relations with the bath while the critter's in the house.



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During the hot summer months, when fishing tapers off in inland waters, Tarheel anglers take to the salt waters of the sounds or the Gulf Stream. The action shot above barely missed the leap of a dolphin from the ripple at left of fishing pole to the splash below the buoy. (Photo by Rod Amundson)

Mrs. Durrenberger thinks it would be nice if "hole in the head" dropped dead.

Bob thinks it's one of the most attractive additions to modern living ever brought into an American home. He suspects a museum may make a bid for his unusual fish and, if the price is right, Bob will sell.

In the meantime, none of his friends dare mention any fishing expedition they've ever been on. Bob gives them the pitying glance that Frank Buck might bestow on a man who hunts rabbits.

Mrs. Durrenberger has a private suspicion that life around the old homestead is never going to be the same.

It is hard to be married to a fisherman at all, much less one who catches a genuine blue-eyed, jet-propelled, hole-in-head fish.

Charlotte says: "He's always been pretty modest, in comparison with most men, but you can tell he feels apart from others since that fish came into our lives."

Bob just smiles with the dreamy, contemplative gaze of a man of many sterling parts. Then he goes in and gets "old hole in the head" to spout some more.

Once in a while he calls up his former buddies and asks them if they have any interesting yarns to tell him.

The answer is no, they haven't.

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